

### REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the specification

The specification is amended, as shown in the foregoing AMENDMENT TO THE SPECIFICATION, to correct a minor informality. It is respectfully submitted that no new matter is added, as the change simply corrects a minor informality.

Entry of the AMENDMENT TO THE SPECIFICATION is respectfully requested in the next Office communication.

2. In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

Claim 1 is amended to clarify that the log files or statistics concern increasing deviations or irregularities such that repairs can be carried out or wearing parts can be replaced before the at least one bank note processing machine fails. It is respectfully submitted that no new matter is added, since support for the amendment may be found, for example, at least on page 35, lines 19-24 of the accompanying description in the specification as originally filed.

Claims 2-81 are left unchanged.

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

3. Rejection of claims 1-10, 24-29, 31-38, 40-50, 58, 61-66, 68, 69, and 71-81 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) and in view of U.S. publication no. 2002/0091972 (*Harris et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claim 1.

The remaining claims depend from claim 1, and are therefore patentable as containing all of the recited elements of claims 1, as well as for their respective recited features.

By way of review, the embodiment of pending claim 1 requires a system comprising at least one banknote processing machine, which is connected to a service center by means of a network. The system is configured so that data necessary for operation of the at least one banknote processing machine and/or data produced during operation of the at least one banknote processing machine are exchanged between the banknote processing machine and the service center via the network. Log files or statistics about increasing deviations or irregularities occurring during operation of the at least one bank note processing machine are transmitted to the service center over the network, and the service center evaluates the log files or statistics and causes repairs to be carried out or wearing parts to be replaced before the at least one bank note processing machine fails.

In this manner, an active response approach to repair machines or replace wearing parts on an ongoing, continuous basis as the specific need arises is provided.

In contrast to amended claim 1, the *Makino* publication discloses an ATM network where customer specific display screens and services are provided to individual customers based on stored attribute information for those customers (abstract; at least paragraphs [0009], [0010], [0016], [0061], and [0064]).

The *Makino* publication is completely silent as to log files or statistics about increasing deviations or irregularities occurring during operation of the ATMs being transmitted to a service center over a network, and the service center evaluating the log files or statistics and causing repairs to be carried out or wearing parts to be replaced before the ATMs fail, all as required by amended claim 1.

On page 3, the Office action acknowledges that the *Makino* publication fails to disclose log files being evaluated to effect machine repairs. It is respectfully submitted that the *Makino* publication also fails to disclose log files or statistics about increasing deviations or irregularities occurring during operation of the ATMs being transmitted to a service center over a network, and the service center evaluating the

log files or statistics and causing repairs to be carried out or wearing parts to be replaced before the ATMs fail, all as required by amended claim 1.

The Office action next turns to the *Palusamy* patent, which discloses an integrated information system provided for a plant with interactive processes running in functional equipment subsets, such as a nuclear power generation plant (abstract).

The system of the *Palusamy* patent allows plant management and/or maintenance personnel to collect any available data regarding the subsystems operating in a plant or in an area of the plant, to coordinate maintenance and repair activities such that downtime for work on one or more articles or subsystems can be used for simultaneous work on other articles or subsystems (i.e., a scheduled maintenance program) (col. 2, line 67 through col. 3, line 5). Thus, an integrated diagnostic and predictive instrumentation for a number of different interdependent subsystems of a larger system is suggested for taking advantage of available synergies (col. 3, lines 19-23).

The diagnostics and maintenance arrangement makes information typically reviewed by different groups, such as control and safety or engineering and maintenance departments available to all such groups thus providing various useful lines of communication and data access availability (col. 3, lines 40-47; col. 5, lines 39-42; col. 7, lines 1-9).

To provide the data to the different groups, the system of the *Palusamy* patent generates prioritized reports to alert users to potential operational and/or maintenance problems (col. 4, lines 20-22).

The system of the *Palusamy* patent monitors demand levels on elements and decrements the remaining useful life of an element as a function of the demand levels to provide predictive and diagnostic capabilities (col. 5, lines 14-24). This is in contrast to amended claim 1, in which log files or statistics about increasing deviations or irregularities occurring during operation of the at least one bank note processing machine are transmitted to a service center over a network, and the service center evaluates the log files or statistics and causes repairs to be carried out or

wearing parts to be replaced before the at least one bank note processing machine fails.

While the system of the *Palusamy* patent does include sensors 50 coupled to data processing units 54, which are coupled to data acquisition means 56 for collecting and reducing data (col. 6, lines 1-6), there is no disclosure that the system of the *Palusamy* patent includes log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine that are transmitted to a service center over a network, and the service center evaluates the log files or statistics and causes repairs to be carried out or wearing parts to be replaced before the at least one bank note processing machine fails, as is required by amended claim 1.

Thus, while the *Palusamy* patent provides predictive scheduled maintenance based upon demand levels on elements by decrementing the remaining useful life of an element as a function of the demand levels, there is no disclosure that the *Palusamy* patent provides log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine, as is required by amended claim 1.

On page 4, the Office action acknowledges that the *Makino* publication fails to disclose log files or statistics about ATM operating deviations.

The Office action then turns to the *Harris* publication. The *Harris* publication discloses a method for predicting machine or process faults (title). The method involves a data set evaluation phase and a monitoring phase (abstract). The data set evaluation phase requires an analysis of historical operating data from one or more machines or processes to identify significant precursor patterns associated with the occurrence of error codes or events (abstract). The method next involves developing predictive models based on the application of one or more statistical tools and pattern recognition techniques whereby future occurrences of the error codes may be predicted within a defined time window from an analysis of the occurrences of significant precursor events within a data collection time window which precedes the prediction time window (abstract). Operating data, including the occurrences of the

significant precursor events, are then collected during the data collection time window and the predictive model is applied to the data collected during the data collection window to generate predictions of the occurrence of the error codes within a predefined prediction time window (abstract).

In particular, the *Harris* publication discloses first gathering and analyzing historical operating data from machines or processes, and creating a program to predict the occurrence of significant events to determine whether or not the targeted events will occur within a predefined prediction window based on historical operating data gathered during a data collection window which precedes the prediction window (paragraph [0006]). This program is used to monitor and forecast to predict a certain event by collecting operating data from a targeted machine or processes on an *established schedule or on a periodic basis* (paragraphs [0013], [0037]).

Prediction reports are generated detailing which errors will occur during successive prediction windows and the prediction reports identify the particular machines or processes on which the errors will occur, and specify the times at which the errors are predicted to occur (paragraph [0013]). With this program, error codes can be predicted well in advance of their actual occurrence so that proper steps (i.e., scheduled maintenance) can be taken to prepare for their occurrence, or to avoid them altogether (paragraph [0038]).

In this manner, if failures are predicted accurately, maintenance can be forestalled until it is actually necessary, and shutdowns can be planned for to reduce their impact on efficiency and productivity (paragraph [0004]). However, there is no specific disclosure in the *Harris* publication that repairs are actually carried out or wearing parts replaced in response to an evaluation by a service center based upon log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine, as is required by amended claim 1.

The *Harris* publication identifies two common approaches to minimize the adverse effects of unplanned shutdowns. In particular, the “break and fix” mode, and the scheduled maintenance approach (paragraph [0002]). The method of the *Harris*

publication is a variation of the scheduled maintenance approach, as discussed above, in particular, “shutdowns can be planned for to reduce their impact on efficiency and productivity” (paragraph [0004]). As discussed in detail above, the *Palusamy* patent also discloses a variation of the scheduled maintenance approach.

This is in contrast to the system of amended claim 1, in which repairs are actually carried out or wearing parts replaced in response to an evaluation by a service center based upon log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine. This is not a scheduled maintenance approach, but rather, an active response approach to repair machines or replace wearing parts on an ongoing, continuous basis as the specific need arises.

Thus, there is simply no disclosure in the *Harris* publication of creating log files or statistics about increasing deviations or irregularities occurring during operation of the at least one bank note processing machine, which are transmitted to a service center over a network, and the service center evaluates the log files or statistics and causes repairs to be carried out or wearing parts to be replaced before the at least one bank note processing machine fails, as is required by amended claim 1.

In summary, none of the *Makino* publication, the *Palusamy* patent, nor the *Harris* publication disclose or suggest having log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine being transmitted to a service center over a network, and the service center evaluating the log files or statistics and causing repairs to be carried out or wearing parts to be replaced before the at least one bank note processing machine fails, as is required by amended claim 1.

Since none the *Makino* publication, the *Palusamy* patent, nor the *Harris* publication disclose or suggest having log files or statistics about increasing deviations or irregularities occurring during operation of at least one bank note processing machine being transmitted to a service center over a network, and the service center evaluating the log files or statistics and causing repairs to be carried out

or wearing parts to be replaced before the at least one bank note processing machine fails, as is required by amended claim 1, the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication also fail to disclose or suggest these features.

Accordingly, since the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication fails to disclose or suggest every feature of amended claim 1, a *prima facie* case of obviousness cannot be established with respect to claim 1, and withdrawal of this rejection is respectfully requested.

As mentioned above, applicants submit that independent claim 1 is patentable and therefore, claims 2-10, 24-29, 31-38, 40-50, 58, 61-66, 68, 69, and 71-81, which depend from claim 1, are also considered to be patentable as containing all of the elements of claim 1, as well as for their respective recited features.

4. Rejection of claims 11-20 and 22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. publication no. 2002/0046061 (*Wright et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Wright* publication fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claims 11-20 and 22 depend.

Accordingly, withdrawal of this rejection is respectfully requested.

5. Rejection of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. patent no. 6,508,398 (*Estes*)

Reconsideration of this rejection is respectfully requested on the basis that the *Estes* patent fails to provide for the deficiencies of the proposed combination of the

*Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claim 21 depends.

Accordingly, withdrawal of this rejection is respectfully requested.

6. Rejection of claim 23 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. patent no. 7,092,907 (*Kanevsky et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Kanevsky* patent fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claim 23 depends.

Accordingly, withdrawal of this rejection is respectfully requested.

7. Rejection of claims 30, 53-57, and 67 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. patent no. 6,430,470 (*Nakajima et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Nakajima* patent fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claims 30, 53-57, and 67 depend.

Accordingly, withdrawal of this rejection is respectfully requested.



8. Rejection of claim 39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. publication no. 2004/0164141 (*Egami et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Egami* publication fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claim 39 depends.

Accordingly, withdrawal of this rejection is respectfully requested.

9. Rejection of claims 51 and 52 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. patent no. 7,395,241 (*Cook et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Cook* patent fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claims 51 and 52 depend.

Accordingly, withdrawal of this rejection is respectfully requested.

10. Rejection of claims 59 and 60 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. patent no. 6,363,164 (*Jones et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Jones* patent fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claims 59 and 60 depend.

Accordingly, withdrawal of this rejection is respectfully requested.

11. Rejection of claim 70 under 35 U.S.C. § 103(a) as being unpatentable over U.S. publication no. 2002/0035541 (*Makino et al.*) in view of U.S. patent no. 5,311,562 (*Palusamy et al.*) in view of U.S. publication no. 2002/0091972 (*Harris et al.*) and further in view of U.S. publication no. 2001/0051884 (*Wallis et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the *Wallis* publication fails to provide for the deficiencies of the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication, as discussed above in detail with respect to claim 1, from which claim 70 depends.

Further, the *Wallis* publication fails to disclose the features of claim 70, which features are acknowledged on page 8 of the Office action to be missing from the proposed combination of the *Makino* publication, the *Palusamy* patent, and the *Harris* publication.

In particular, in contrast to pending claim 70, which requires the service center to ask the operating person to deliver necessary replacement parts to the location of a banknote processing machine, the *Wallis* publication instead discloses an owner requesting pick up of a damaged item for delivery to a repair center (paragraph [0014]).

Thus, none of the *Makino* publication, the *Palusamy* patent, the *Harris* publication, or the *Wallis* publication discloses the service center asking the operating person to deliver necessary replacement parts to the location of a banknote processing machine, as is required by pending claim 70.

Accordingly, withdrawal of this rejection is respectfully requested.

12. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

Please charge any additional fees required or credit any overpayments in connection with this paper to Deposit Account No. 02-0200.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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